



# Board Meeting

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February 12, 2015  
Chattanooga, TN



# President's Report

February 12, 2015

BILL JOHNSON  
PRESIDENT AND CEO



# Chattanooga



# Innovation District



Start-up businesses, business incubators and accelerators, advanced technology, existing industries and amenities, in a walkable urban core.



# Chattanooga Office Complex



# Energy | Environment | Economic Development





# Strategic Imperatives

Serve the people of the Tennessee Valley



# 2015 Priorities

## Rates

- Maintain low rates and align O&M spending with revenues

## Debt

- Effectively manage debt to ensure long-term financial health

## People Performance Excellence

- Work safely and effectively
- Proactively seek opportunities for continuous improvement
- Focus on values and behaviors

## Asset Portfolio

- Pursue operational excellence
- Position Watts Bar for successful commercial operations in 2015
- Balance the portfolio to provide cleaner, reliable and affordable energy

## Stewardship

- Stimulate economic development and investment in the Valley
- Strengthen customer loyalty and relationships
- Manage the Tennessee River system
- Protect and improve the natural resources and the use and enjoyment of public lands



# Financial Overview



TVA

A photograph of a building with a large blue sign featuring the white letters 'TVA'. The building is white with a blue sky in the background. To the left of the building, there is a stone structure with a classical architectural style.



# Financial Overview

## “Off-Peak Pricing”

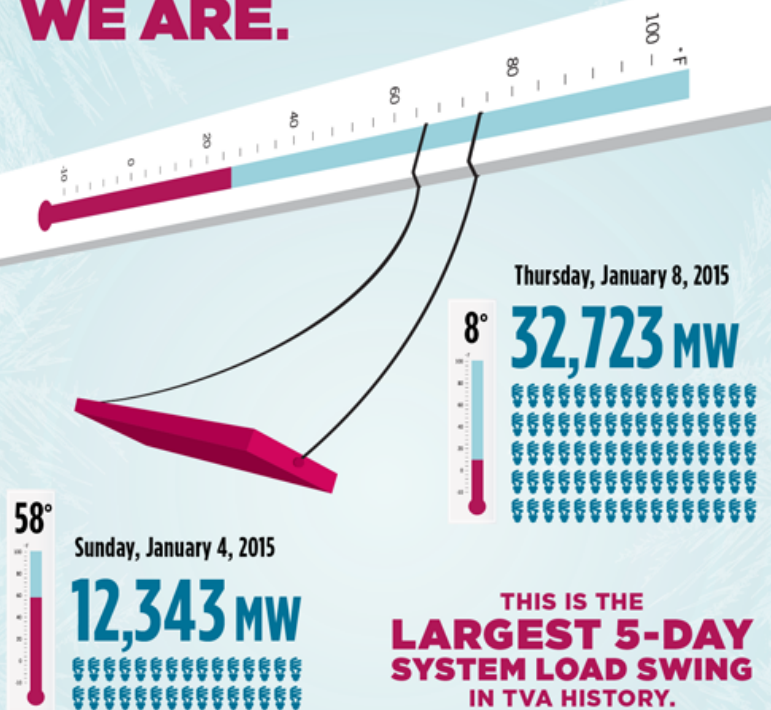


# Operational Overview



# Who's ready for a huge temperature swing?

**WE ARE.**



THIS RECORD-BREAKING SWING RESULTED IN A  
**20,380 MW POWER INCREASE**

THAT IS  
ENOUGH TO  
POWER

**3** NEW YORK  
CITIES



# Reliable Electricity





# Combined-Cycle Gas Plant





A photograph of a large-scale solar farm. Rows of blue photovoltaic panels are mounted on metal racks, sloping across the frame. In the background, high-voltage power lines and transmission towers are visible against a cloudy sky. The text "Utility-Scale Solar PPA" is overlaid in white on the left side of the image.

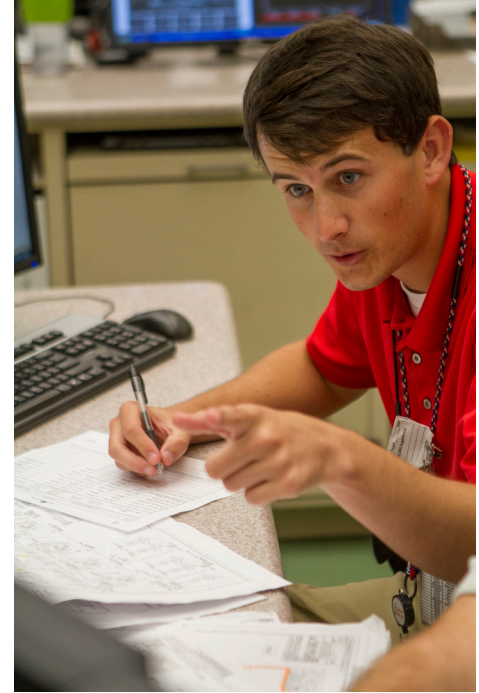
# Utility-Scale Solar PPA

# Nuclear and Fossil





# Watts Bar Nuclear Plant, Unit 2





# Coal



# River System





# Dam Inspection





# Modifications and Maintenance



# Energy Efficiency





# Integrated Resource Plan



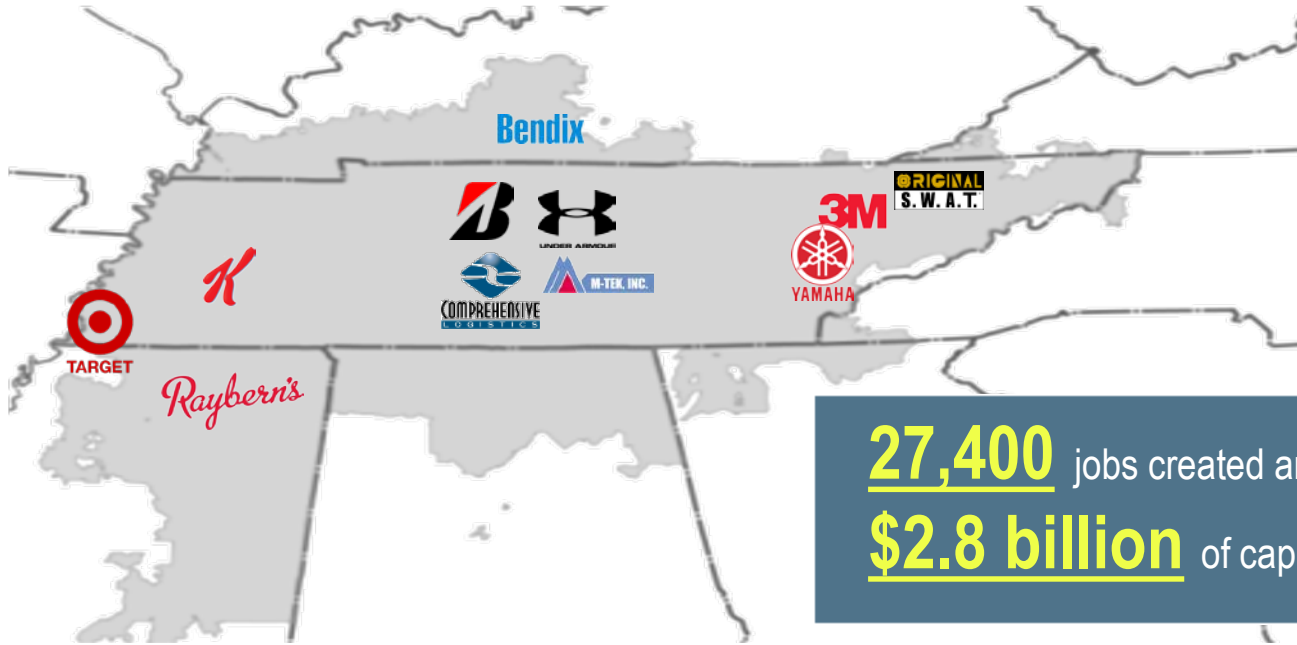


# Economic Development



# Economic Development

Stimulating economic development and investment in the Valley



27,400 jobs created and/or retained  
\$2.8 billion of capital investment



# Engineer Of The Year







Ike Zeringue





Jeff Phillips



Engineer of the Year









# External Relations Committee





# Transmission Rights-of-Way

Jacinda Woodward  
SVP Transmission

# Why We Do It / Our Impact

**Achieving our purpose in vegetation management in a safe, reliable, compliant and cost-effective manner must be balanced with sensitivity to property owner concerns**

Support TVA's Three E's

Energy, Environment and  
Economic Development

- Safe
- Reliable
- Compliant
- Cost-effective

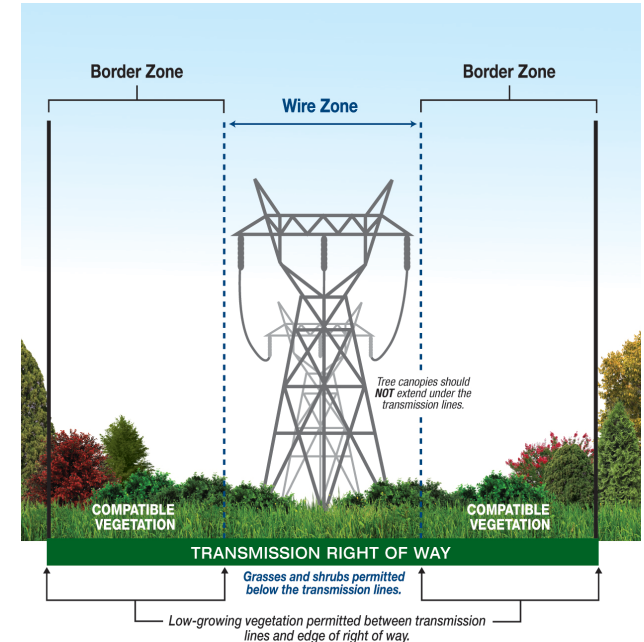




# Rights and Processes

**TVA has valid land rights obtained through the easements that were negotiated with current or former property owners; property owners are not always familiar with these rights and consider vegetation removal a personal loss**

- Easements provide perpetual right to clear rights of way and keep them clear of trees, brush, buildings, structures and fire hazards
- TVA establishes two zones within a transmission right of way: wire zones and border zones
- In the wire zones directly under the lines, we allow only low-growing, non-woody plants and maintain by mowing and limited use of herbicides
- In the border zones between the edge of the right of way and the lines, and with prior approval, we allow low-growing trees and shrubs



# Program and Property Owner Concerns

**TVA conducts work on over 50,000 property owners' land with 10 to 12 formal complaints each year**

## Program Objectives

Adequate Clearance for:

- Safety
- Reliability
- Compliance

Cost-Effective  
Program  
Implementation:

- Wire Zone
- Border Zone



## Concerns

- Property Value
- Herbicide Risks
- Erosion Risks
- Protection of Trees
- Visual Aesthetics
- Personal Loss

# How We Manage

## **Communicate to Gain Understanding**

- Communication training for ROW personnel
- Continuing collaboration with TVA Communications & External Relations

## **Border Zone Reclamation**

- Consistent program implementation
- Maximize cleanup

## **Wire Zone Improvement**

- EPA approved herbicides only
- Selective application instead of broadcast
- Seek to develop meadow habitat

## **QA/QC Program**

- Contractor and program oversight

## **Industry Best Practices**





# Striving to be Better

## Communication Improvements

- Public education / TVA communication
- Utilize construction open house
- Improved property owner notification

## Program Refinements

- Collect data on each corridor / LiDAR
- Precision corridor management

## Implementation Oversight

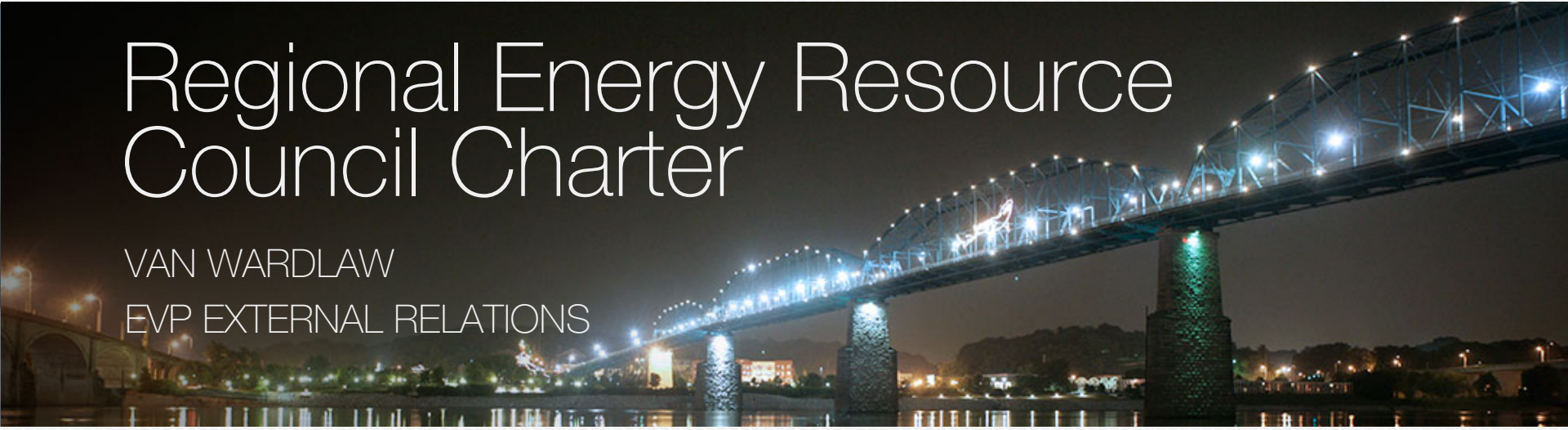
- Continue to refine QA/QC
- Implement standardized grading system



# Regional Energy Resource Council Charter

VAN WARDLAW

EVP EXTERNAL RELATIONS



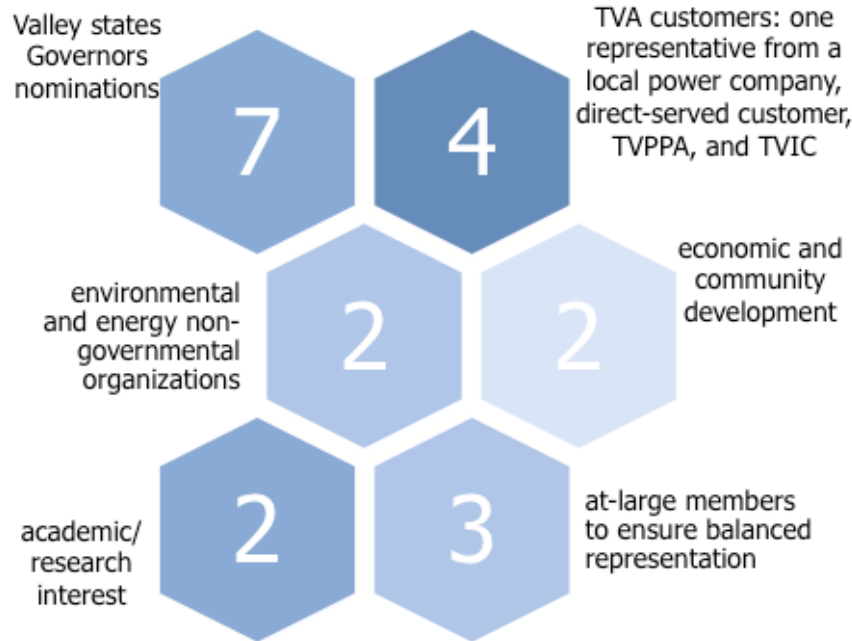
# Background

- Created in 2013 to provide TVA advice from public and private sectors on its energy activities and on setting priorities among competing objectives and values
- Advice and recommendations reported to the TVA Board External Relations Committee
- Current Charter expires July 31, 2015



# Membership (Based on the Charter)

Council consists of up to 20 members with membership balanced to include a broad range of diverse views and interests



# Recommendation

- Approve and authorize renewal of the proposed Charter
- Authorize the Vice President, Stakeholder Relations, to serve as Designated Federal Officer
- Delegate to the Chief Executive Officer the authority to fill vacancies that may arise during the course of the second term



# Audit, Risk, and Regulation Committee







# People and Performance Committee





# Finance, Rates, and Portfolio Committee





# Financial Performance Update

JOHN THOMAS  
CHIEF FINANCIAL OFFICER





# Q1 Fiscal Year 2015

**Net Income: \$179M better than plan and \$148M better than last year**

Operating Revenue (\$71M above plan)

- Colder weather resulting in 5% more heating degree days

Fuel Cost (\$36M favorable to plan)

- Increased lower cost generation (Hydro and Nuclear) and lower gas prices

Operating & Maintenance (\$58M favorable to plan)

- Cost reduction initiatives
- Timing of outage and project spending
- On track to meet \$500M reduction in FY15

Interest Expense (\$5M favorable to plan)

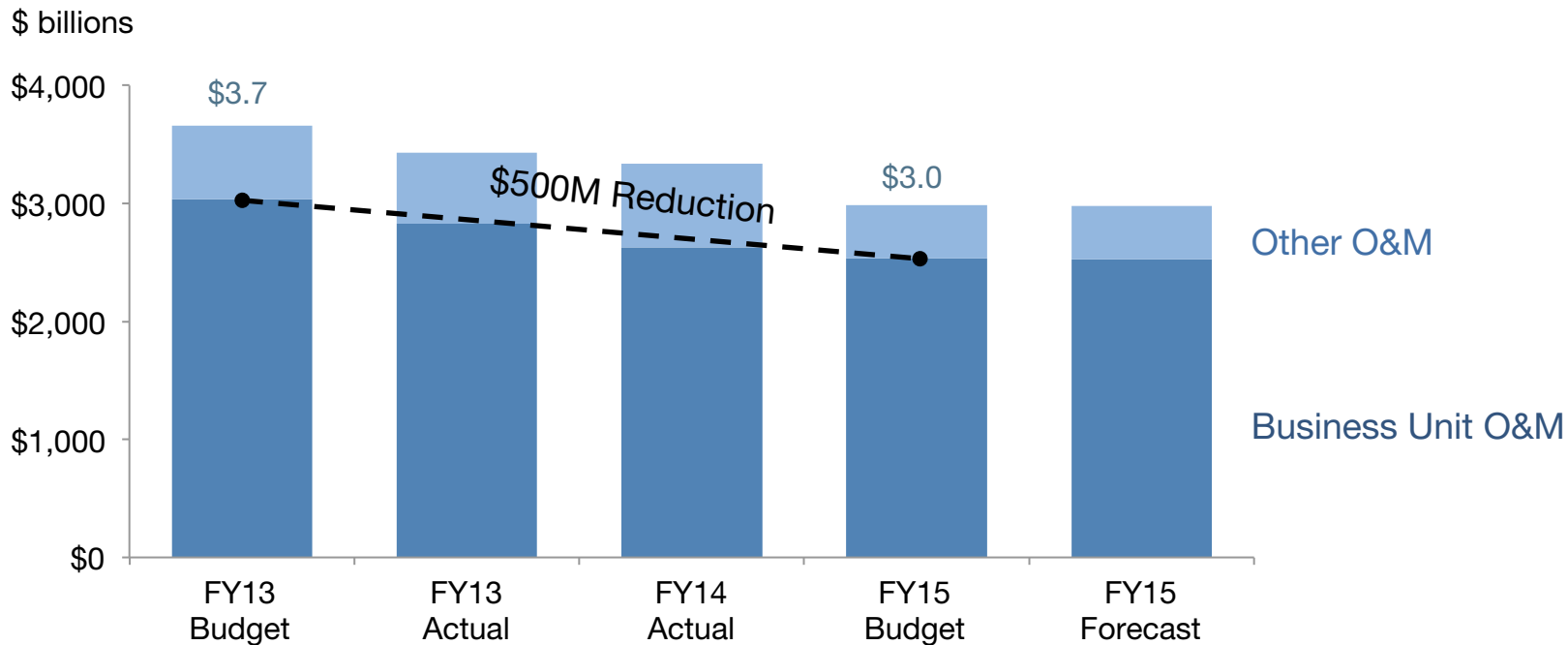
- Lower interest rates

# Q1 Summary Income Statement

Net Income favorability due to higher revenues and lower operating spend

\$ million	FYTD 2015			FYTD 2014	
	Actual	Budget	Variance Fav/(Unfav)	Actual	'15 v '14 Fav/(Unfav)
Operating Revenue	\$2,411	\$2,340	\$71	\$2,382	\$29
Fuel & Purchased Power	\$783	\$819	\$36	\$794	\$11
Business Unit O&M	\$600	\$648	\$48	\$637	\$37
Other O&M, Reagents	88	98	10	170	82
Total Operation & Maintenance	\$688	\$746	\$58	\$807	\$119
Taxes, Depreciation, Other	\$567	\$576	\$9	\$549	(\$18)
Interest	\$292	\$297	\$5	\$299	\$7
Net Income (Loss)	\$81	(\$98)	\$179	(\$67)	\$148

# On Track to Achieve O&M Reduction Target



\*Business Unit O&M includes Routine, Outage, Projects.

Other O&M includes items such as Pension, Post-Retirement Financing Costs, OWOP, and Winning Performance adjustment.



# Q1 Summary Cash Flow Statement

\$ million	FYTD 2015			FYTD 2014	
	Actual	Budget	Variance	Actual	'15 v '14
Cash Flow from Operating Activities	\$473	\$513	(\$40)	\$508	(\$35)
Cash Flow used in Investing Activities	(998)	(928)	(70)	(800)	(198)
Cash Flow from Financing Activities	524	415	109	(619)	1,143
Net Change in Cash & Cash Equivalents	<u>(\$1)</u>	<u>\$0</u>	<u>(\$1)</u>	<u>(\$911)</u>	<u>\$910</u>
Ending Cash & Short-Term Investments	\$499	\$500	(\$1)	\$691	(\$192)
FY Debt and Financing Obligations	\$26,562	\$26,743	(\$181)	\$26,833	(\$271)
Statutory Debt	24,137	24,318	(181)	24,207	(70)

# First Quarter Summary (Results v. Plan)

- Higher Revenue
- Lower Fuel Cost
- Lower Expenses:
  - Operation & Maintenance
  - Interest
- Higher Net Income and Lower Debt



# Off-Peak Overlay Rate Extension

JOHN THOMAS

CHIEF FINANCIAL OFFICER



# For Board Consideration

Request Board approval to extend the Off-Peak Overlay product

# Background

- The Off-Peak Overlay was introduced as a pilot in November 2011 to incent additional off-peak power usage
  - Improve utilization of generation assets
  - Lowered customers average rate
  - 468 MWs of load was moved off-peak
- The pilot program expires on March 31, 2015

# Recommendation

Based on the success of the pilot, recommend extending this product



# Extension of Fleet Services Contract

CHARLES PARDEE

CHIEF OPERATING OFFICER



# Purpose

- TVA awarded a five-year contract to G•UB•MK in May 2010
- TVA now wishes to:
  - Extend the term of the contract by three years
  - Increase the contract ceiling by \$585 million

## **For Board Consideration:**

**Approval to increase the total value of the G•UB•MK contract to \$1.535 billion, and extend the contract term from five to eight years.**

# Background

- The Board approved a five year contract award to G•UB•MK in May 2010 to cover non-nuclear modifications and maintenance work
  - Contract allows up to a five year extension pending board approval
- G•UB•MK selected as part of strategic plan to implement standardized processes and performance for TVA's non-nuclear fleet
- G•UB•MK is a Valley-wide company that employs and supervises craft and non-craft workers to perform non-nuclear projects specifically for TVA
- G•UB•MK's scope of work is not generally part of TVA's core work
- No minimum amount of work guaranteed
- Eighty-seven percent of the total expenditures are for craft labor



# Benefits of G•UB•MK Contract

- The contract's cost and incentive structure is based on TVA authorizing a high volume of work and alignment of incentive structure to organizational goals
  - G•UB•MK has incentives and penalties based on performance
  - G•UB•MK overall pricing is appreciably below comparable industry standard
- G•UB•MK has continuously improved performance through replication of lessons learned, cost reductions for repeat projects, and a persistent focus on safety
- OIG performed a Fraud Risk Assessment in advance to reduce/mitigate potential fraud

# Alternative Considered

## **Issue new RFPs as necessary to support discrete projects within maintenance and modification work scope**

- Alternate deemed not in TVA's best interest due to:
  - Scheduled reduction of coal units requiring support services
  - Increase in gas fleet with associated maintenance needs
  - Increase in capital projects to maintain plant reliability
  - Ongoing planning for outages and project work scheduled for calendar 2015

# Recommendation

Authorize a three-year extension of the term of the G•UB•MK Constructors contract, from May 2015 until May 2018, and approve a \$585 million increase in the contract ceiling from \$950 million to \$1.535 billion



# Acquisition of Gas Facility

CHARLES PARDEE

CHIEF OPERATING OFFICER



# For Board Consideration

Delegate authority to the CEO to enter into agreements and other instruments as necessary to complete the purchase of the gas facility consistent with the terms of the Purchase Agreement

# Background

- TVA continues to require modest additions of intermediate, flexible generation
- TVA meets customer needs through a diverse, low-cost, reliable portfolio
- TVA has an opportunity to add a low emitting resource



# Background

- Acquiring the facility will provide long-term, low-cost, reliable power to the Southwest region of our system
- Acquisition is contingent upon several final approvals including regulatory, environmental, and counterparty arrangements
- This natural gas opportunity is consistent with the direction in TVA's Integrated Resource Plan (IRP)

# Risks and Benefits Considered

- Cost-effectiveness - using least-cost planning principles
- Environmental stewardship – commitment to environment
- Portfolio flexibility – ensures reliability
- Portfolio diversity – long-term resiliency
- Regional impacts – economic prosperity

# Recommendation

Delegate authority to the CEO to enter into agreements and other instruments as necessary to complete the purchase of the gas facility consistent with the terms of the Purchase Agreement



# Utility-Scale Solar PPA

CHARLES PARDEE

CHIEF OPERATING OFFICER



# For Board Consideration

Authorize the CEO to enter into a Power Purchase Agreement for a new-to-the-Valley solar resource

# Background

- TVA continues to expand its renewables portfolio
- TVA meets customer needs through a diverse, low-cost, reliable portfolio
- TVA has an opportunity to add a non-emitting resource

# Background

- New-to-the-valley solar will supply 80 MWs of power from single-axis tracking solar in northern Alabama
- Commercial operation is scheduled for 2016
- Prices are economically competitive with other system generation alternatives
- Finalizing the contract is contingent upon successful environmental review
- This solar opportunity is consistent with the direction in TVA's Integrated Resource Plan (IRP)

# Risks and Benefits Considered

- Cost-effectiveness - using least-cost planning principles
- Environmental stewardship – commitment to environment
- Portfolio flexibility – ensures reliability
- Portfolio diversity – long-term resiliency
- Regional impacts – economic prosperity





# Recommendation

Authorize the CEO to enter into a Power Purchase Agreement for a new-to-the-Valley solar resource



# Finance, Rates, and Portfolio Committee





# Nuclear Oversight Committee





